



THE CITY OF SAN DIEGO

Composting

SWANA 2010

Composting Excellence Award

City of San Diego

Environmental Services Department

Waste Reduction & Disposal Division

(The Miramar Greenery)



ENVIRONMENTAL SERVICES DEPARTMENT

SWANA Composting Systems Excellence Award

CITY OF SAN DIEGO

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MIRAMAR GREENERY COMPOSTING OPERATION

The City of San Diego Environmental Services Department is pleased to submit the following application for SWANA's 2010 COMPOSTING Excellence Award.

1) Design of Composting System

The City of San Diego, Environmental Services Department (ESD), operates the Miramar Greenery, a 74-acre organics recycling facility located on a closed portion of the City's Miramar Landfill. The Greenery mulching operation had a humble beginning in 1985, with limited success in achieving project goals of diverting green waste from landfill disposal and producing a quality end product suitable for public use. At that time, the Greenery was mainly a grinding operation utilizing one tub grinder and four front-end loaders. Material contamination was a significant problem, due to residents placing greens in plastic bags for separate curbside collection.



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In late 1997, ESD began a large-scale composting operation at the Greenery in order to improve the quality of products offered. The composting system has the following key design elements:

Physical Design

The site has four main functions, divided into nine separate sections:

Facility Access and Material Drop-off

- 1) Material drop-off zone for general yard waste
- 2) Material drop-off zone for clean wood, drywall and woody landscaping
- 3) Material drop-off zone for source separated food waste

Equipment Operation

- 4) Grinding area #1
- 5) Grinding area #2
- 6) Wood chip drying and screening area
- 7) Compost screening area

Windrow Management

- 8) Windrows

Finished Products & Storage

- 9) Finished product storage area



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- Facility Access and Material Drop-off - The facility is designed with one main access road and entrance to the facility. When entering the facility, the public is directed to one material drop-off zone and larger City and commercial vehicles are sent to another specified drop-off area to provide a buffer zone from the general public.
- Equipment Operation – There are two separate grinding areas. The main area is centered around the Diamond Z 7000 horizontal grinder which handles the bulk of the yard waste grinding for material that will be placed into windrows. The second grinding area is around an older Diamond Z E6000 tub grinder, which is used for grinding clean dimensional lumber and specialty grinds for wholesalers. Directly adjacent to the E6000 grinding area is coloring and wood chip screening area where the Amerimulch MegaMite colorizer is used to dye woodchips with a non-toxic iron oxide dye. The compost screening area is at the highest point of the facility so that finished product is never contaminated with unfinished feedstock. The Greenery recently procured a state of the art Komptech XL star screen, which screens compost in to three fractions and removes light plastics using air sifting technology.
- Windrow Management – Material is placed in approximately 55 windrows on nearly 22 acres of the facility site and are constructed utilizing a Caterpillar 657G scraper and a front end loader. They are placed 20 feet apart to accommodate watering and turning. Windrows run from west to east to conform to site contours and to facilitate proper drainage and control runoff. Food waste windrows are in a separate area on the site. The windrows are turned by a Scarab 828 straddle turner. All windrows are put through a minimum 15 day pathogen reduction process. The majority of our windrows are used to produce compost, and those are put through a 70 day active composting process. Every 5,000 cubic yards of composted material is tested for regulated metals, fecal coliform, salmonella, pH, organic matter, particle distribution and C:N ratio.
- Finished Products & Storage – After composted material has passed the maturity testing, it is transported to the screening area. Screened finished compost is placed in the product storage area. All overs from the screening process pass through an air sifter to remove film plastic and other light contaminants. The clean overs are sold as woody mulch or reintroduced to windrows to increase porosity.



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Environmental Design

The compost facility was designed to take advantage of the existing contours and optimize the site layout to insure efficient use of machinery and personnel in processing the material.

System Merits

The process of creating compost can be technically challenging but the Greenery has been able to refine that process to create materials that are uniform from batch to batch, highly desirable by the public and beneficial to the environment. Through a smooth system design, collected greens are ground, arranged into windrows, and turned every three days, until the Process to Further Reduce Pathogens (PFRP), as specified in state regulations, is achieved. The PFRP kills weed seeds and other pathogens by maintaining the material above 131°F for 15 consecutive days and five turnings. The windrows are monitored closely and watered as needed.

Environmental protection

Operations at the Greenery are predicated upon environmental protection. A key component of environmental protection is product testing. The Greenery tracks windrow in a batch system, which helps determine when sampling and laboratory analysis shall occur. Windrows are never moved to the screening area before satisfactory maturity results have been reported.

Additionally, in the summer of 2009 the operation conducted a pilot of Aerated Static Pile systems. The goal of the pilot was multifaceted, but was ultimately to prepare operation for increased regulations through hands-on training for staff on a technology that will meet strict air and water discharge requirements. Two systems were pre-qualified, and ESD selected one technology (The GORE Cover System technology) for a compost demonstration. The GORE system was brought to the Greenery, operated for two batches of compost production, and evaluated based on the following parameters:

- Operating capability of technology
- Ability to produce high quality finished compost
- Ability to meet or exceed local, county and state regulations
- Total cost to build and operate compost technology



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Overall impact of the program on human health, environmental quality and resource conservation

The City is proud of the lengths taken to ensure only positive impacts on human health, environmental quality and resource conservation. To that end, the Greenery employs a stringent testing schedule (as described above) that ensures the quality of the material provided to the public.

In 2002 the City of San Diego's Environmental Services Department, Refuse Disposal Division, Environmental Management System (EMS) was certified to the ISO 14001 international standard. The scope of the Division's registration included its active and inactive landfills, including the Miramar Greenery operation. Therefore, the Miramar Landfill became the first publicly managed landfill in the nation to achieve ISO 14001 certification. In 2010, the Environmental Services Department internalized its EMS program and still reaps all the benefits while forgoing the lengthy and cost prohibitive ISO 14001 certification process.

Our EMS reinforced an existing culture of environmental stewardship and proved the relationship between environmental responsibility and fiscal responsibility is synergistic. Specific Environmental Management Programs (EMPs) were implemented throughout the Division resulting in the following achievements:

Motive Equipment: Standard Operating Procedures (SOPs) were developed and implemented to shut off the equipment during breaks and lunch periods and to periodically blow out the radiators. Equipment lease contracts were modified to add an EMS participation clause as well as minimum warm up idle times during morning maintenance periods. As a result, this EMP eliminated over 20,000 idle time hours with *monthly* reductions of approximately: 200,000 lbs CO², 1,200 lbs CO, 6,000 lbs NO_x, 400 lbs PM 10 and 75 lbs SO_x. In addition we have realized a cost savings of over \$2 million dollars in annual rate savings.

Potable water use reduction: This program resulted in a 100% elimination of potable water use for dust control operations with approximately 31 million gallons of potable water saved on an annual basis. We also realized a 46% annual water cost savings (approx \$30,000) by switching to recycled water use. Additional monthly water meter charge savings in excess of \$6,000 per year were realized through downsizing the meter from a six inch to a four inch main.



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Mulch/compost reclaimed water project: The Greens Processing Area (AB939 Waste Diversion Program) eliminated 100% of its potable water use for processing mulch and compost. Compost was selected as the test case medium due to the stringent requirements and testing it goes through prior to being marketed to the public. The completed compost product was sampled by a contracted test lab and the results indicated a better end product than compost processed with potable water.

In addition, the Greenery not only prevents environmental impacts itself, but also generates a material that helps others to avoid environmental impacts. The Greenery compost helps to amend the sandy and clay soils in the San Diego region. It slowly releases nutrients to plants and improves the characteristics of the soil, allowing sandy soil to absorb more moisture and nutrients, and clay soils to drain.



Both compost and mulch help to minimize water use in San Diego's arid climate, by reducing ground surface evaporation and improving water retention in the soil for plant utilization. Compost and mulch also reduces the need for pesticides while providing a fertile environment for beneficial organisms in the soil.

The mulch generated is used at the landfill to cover slopes, thereby preventing erosion and runoff. A study at the SDSU Soil Erosion Laboratories has found that the Miramar Greenery mulch is able to cut erosion down to 0% and prevent runoff by 50% in even extreme rain conditions. The Greenery mulch is more effective than other synthetic ground cover materials tested in the SDSU lab.

The specifications of the Greenery mulch have also been included in the Regional Standards Committee Green Book as a Type 12(b) mulch, meaning that it has been accepted as an appropriate material for use in erosion control, dust control, and other applications on construction project sites. The City of Poway and Escondido have also recommended the Greenery mulch to builders that need to cover bare ground on their construction sites prior to the approval of occupancy permits.

Overall, the Greenery lengthens the life of the City's Miramar landfill by diverting over 103,246 tons of greens, food, wood, and other organics from the landfill yearly.



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Compatibility with the environment

A positive effect of the City of San Diego's Greenery Compost Operation is its compatibility with San Diego's environment through local landscaping efforts. Due to the availability of cheap and/or free compost produced at the Greenery, residents are discovering that tilling compost into poor quality soil, soil texture is improved by adding water holding capacity and nutrient value. Compost improves poor soil drainage, which is commonplace in San Diego. This also helps reduce wasteful water runoff, which also reduces erosion. Thus, the use of mulch and compost conserves water, a precious resource in this arid region, and also reduces the need for chemical fertilizers by supplying nutrients to the soil.

A local re-vegetation project became an innovative use of ESD mulch. The Marine Corps Air Station, MCAS, planned to mitigate land infested with non-native annual weeds. ESD partnered with Bitterroot Consultants to provide over 68,000 square yards of the mulch necessary for the re-vegetation project. By spreading mulch six inches thick over 88 acres of land, native perennial plant growth is encouraged, while growth of annual weeds is inhibited through the redistribution of nitrogen in the soil.

Innovative or unique aspects of the composting system

The ESD has created several innovative partnerships that enabled the Greenery to diversify its feedstock, maximize its efficiency and create a highly desirable end product. For example, the City is actively expanding food waste as a supplemental feedstock. The City works closely with many local institutions to accept consumer food waste generated by their operations. Greenery staff closely monitors the incoming material and communicate directly with program participants regarding contamination issues. The accepted food scraps are combined with the green waste, adding to the richness of the compost.



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Over the past year, the City assisted in the processing of post-consumer food waste from large events, including San Diego Earth Day (April 2010), San Diego County Fair (June/July 2010), Encinitas Wine Festival (July 2010), Fat Tire Brewery Tour de Fat (October 2010).

In addition to these partnerships, another unique match was made in 2010. Innovive Inc., a San Diego company that provides animal cages and bedding to the research industry, approached ESD wanting to implement animal bedding composting so they could achieve zero waste. ESD Staff conducted a site visit of Innovive and made the assessment that the granulized corn cobs with small amounts of mice urine and feces would be appropriate for open windrow composting. Urea is an excellent source of readily available nitrogen and when received in a feedstock helps kick start the composting process.



Based on these innovative partnerships and the high quality of compost produced, the Greenery now supplies compost to one of the largest orchards in the region, Durling Nursery. Durling is a main supplier of container plants to Home Depot and other chains.

What is different from the rest?

The City of San Diego Greenery Recycling program is outstanding because of the efforts of City employees. The entire program is run by employees, in every step, from curbside collection to sales of greenery materials. In



addition, City employees take pride in the educational efforts associated with the Greenery. All Master Composters in San Diego are required to tour the facility to gain a big picture view of composting operations and its environmental benefits. Greenery staff are frequently requested to conduct site tours for community groups, school children and dignitaries who are interested in learning about the composting process.



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The other unique aspect that sets the Miramar Greenery apart is a commitment to continuous compost research. In



2010 the Greenery conducted an extensive research project testing the compostability of table ware labeled and sold as compostable.

The results of this study were featured in an article in the August 2010 issue of Biocycle Magazine.

2) Regulatory Compliance

Is the site in environmental compliance for operating a composting system?

The Greenery has received all permits and is operating in environmental compliance.

Have they submitted any awards, letter or facility inspection data?

ESD staff utilized the Greenery for an in-depth compostable table ware research study featured in BioCycle Magazine. (Attached)

Is the system integrated and complimentary to other local solid waste management systems?

The Greenery is an integrated system that is fully compatible and complimentary to the overall solid waste management system in which it operates. As a component of the Miramar Landfill operating system, it exemplifies a successful landfill waste diversion program, not only be utilizing a portion of the closed landfill for its operation, but by producing products that are beneficial for landfill revegetation efforts, erosion control and slope stability.



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Have they received a citation and/or corrected a problem?

The Greenery is inspected monthly by an inspector from the Local Enforcement Agency of Cal-Recycle. Any arising areas of concern brought up by the inspector during a visit are addressed immediately. Additionally, a team of highly dedicated staff review the operating permit annually to determine if any operation areas are constantly issues during inspection. If an area is identified as needing update planning, the team initiates a permit revision to ensure the operation is always in compliance and operating in a safe and healthy manner.

If there were problems how were they corrected?

During an inspection in 2010 the LEA noted concern over the post-grinding stockpile height limit, which cannot exceed 25 ' in height. To mitigate this concern, the pile was surveyed and a stake was place to indicate maximum pile height so that all operators can keep the facility in compliance. Another operational correction was implement where windrows are built at a more frequent pace to remove material from the stockpile as soon as it comes in.

Waste screening and quality control

Material being brought to the Greenery is visually inspected at the entrance to the Miramar Landfill to determine if there is contamination. If no contamination is visible, a reduced rate is charged. If material brought to one of the Greenery drop-off zone is contaminated (i.e. contamination initially "hidden" under the visible layers of material when entering the landfill), Greenery staff require the individual to reload the material. These individuals must then pay the full waste disposal charge on top of the fee they already paid to bring the material to the Greenery. If Greenery staff must reload the material, an additional handling fee is charged. These monetary penalties serve as a deterrent to those wishing to bring contaminated material to the Greenery. This comprehensive quality control program, consisting of on-site inspections and enforcement of the additional fees, allows the City to produce, on a consistent basis, high quality compost and mulch.



The program also has strict quality control over in-coming material from the residential curbside greenery collection program. Quality control measures include a customer hotline, inspections of curbside materials, and placing notices on unacceptable materials as a means of educating residents on proper participation.



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3) Planning

Description of the design & effectiveness of the facility's planning process.

As described in section 1), the Greenery began primarily as a grinding operation. It was soon discovered that product contamination and poor product quality would jeopardize the success of the operation and impact the City's ability to achieve state-mandated diversion rates. In order to address these concerns, a team of ESD staff from the Refuse Disposal Division and the department's recycling section created an implementation plan that would bring the Greenery into regulatory compliance, increase diversion, provide a clean and aesthetically pleasing experience for the public, create marketable products and generate revenue. The following steps in the planning process were designed and implemented to achieve these intended results:

Operation Site

- Obtained Compostable Materials Handling Permit to operate a composting facility.
- Developed food scrap composting program and protocols.
- Developed website with pricing and product information.
- Added 45 acres of additional area to the site.
- Undergrounded Landfill Gas Collection lines.
- Created professional directional and facility signage, as well as product use signs.
- Developed customer service booth.

Equipment Upgrade

- Replaced Morbark 737 Trommel screen (50 cy/hour) with Komptech XL Star Screen with dual air sifters (250 cy/hour).
- Added Amerimulch MegaMite Colorizer for making custom woodchip products
- Improved efficiency (see Section 4).



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Product Upgrade

- Obtained the US Composting Council's Seal of Testing Assurance (STA) certification for compost.
- Provide compost and mulch free to City residents.
- Diversified product offerings to meet many end user needs. We now offer red, brown, black, and natural woodchips, ½-3" compost, 2-4" mulch.
- Developed website with pricing and product information.
- Increase material marketing and education efforts regarding green waste compost.
- Offer bulk discounts and deferred accounts.



Continued Research and Planning

- Conducted Pilot of Aerated Static Pile technology: Gore Cover System
- Explored new sources of feedstock (post-consumer food waste from events, animal bedding from Innovive, Kelp processing by-product).
- Researching conveying equipment, electric powered equipment to reduce diesel fuel consumption.
- Conducted research study on compostable table ware.
- Conducted pilot on palm processing equipment, and composting techniques



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Discuss system downtime, if any.

- There are few instances of system downtime, however, it does occur under the following circumstances:
- During equipment maintenance and repair.
- Rain and muddy conditions – Creates difficult working conditions and puts strain on equipment to handle wet material.
- Wind conditions – If winds are too strong, equipment is shut down to maintain air quality and to minimize product contamination due to material being blown throughout the site.

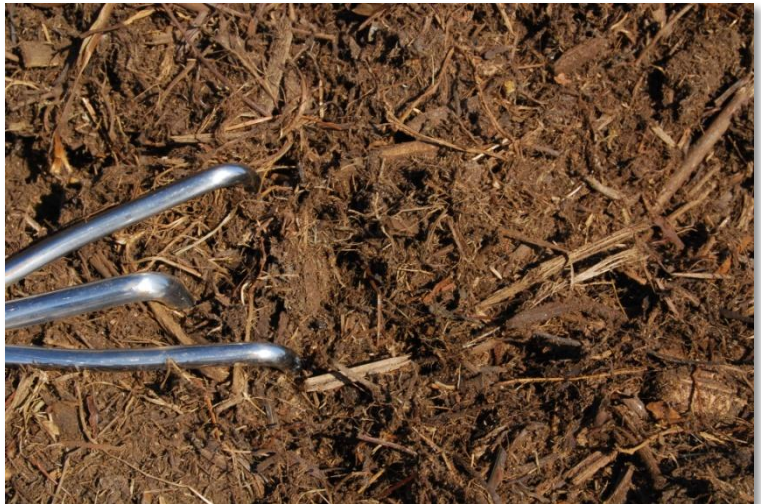
4) Performance, Economics & Cost-Effectiveness

Describe the efficiency of the operation.

In 2009-2010, in anticipation of the addition of 45 acres of processing space, ESD staff conducted an intensive Time and Motion study to break down all components of the operation. Over 5,000 hours of observational data was recorded and analyzed for efficiency. The result was an eloquent understanding of the most “costly” and time consuming aspects of the operation. ESD is currently conducting additional research to implement site design changes, and suitable equipment upgrades.

How does the facility measure their success?

Since the City of San Diego faces State diversion mandates, a top priority and a key measurement of success is the amount of material diverted from landfill disposal. From material processing to product marketing, the Greenery diverts approximately 103,000 tons of material annually. Additional measures of success include the amount of material produced/sold, and material quality. These factors represent the acceptance by the public to use the various materials produced at the Greenery and indicates the overall quality of material generated by the facility based on customer demand.



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Does its operational performance equal or exceed the goals and expectations set forth for this facility and found with other similar systems elsewhere?

The facility's operational performance has exceeded the goals and expectations set forth. As stated above, the main purpose of the Greenery was to divert material from landfill disposal. However, with careful planning, market research, quality control and educational efforts, the facility is bringing in revenue to maximize cost recovery.

How does the organization foster customer service?

Customers, both material providers and end-product users, are key to the success of the composting operation. Customer service, therefore, is extremely important in order to maintain positive, on-going relationships with our customers. This is achieved in several ways:

- Customer Hotline: ESD customer service operators provide detailed information to customers who wish to dispose of material at the Greenery, or who are interested in obtaining Greenery products.
- Website: The Greenery has its own page on the City of San Diego's website, where product information, pricing, hours of operation and even a live camera showing traffic at the gate.
- Price Incentives: The Greenery accepts greens from the City curbside greenery collection program, private contractors, and homeowners countywide. Businesses and non-city residents depositing their green waste in the Greenery pay half the price they would for disposal in the landfill, while City residents can drop off home generated yard waste for free. These price incentives help to maximize diversion, while saving customers money. Included in the cubic yard pricing is loading and tax.
- Personal Attention: ESD Greenery staff provides personal attention and assistance to customers on-site. This includes accommodating special orders/blends of material, facilitating tours, material loading etc.
- Material delivery: ESD offers bulk material delivery for a cost recovery fee only.
- Free samples: ESD is proud of the material produced at the Greenery and free samples are provided to participants at the annual Earth Fair in Balboa Park, to community groups during presentations and to those attending Greenery facility tours.



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Does the system operate within its budget, and are the costs appropriate?

The Greenery is budgeted under the entire Miramar Landfill operating budget. Costs associated with this program are considered a cost-effective and appropriate based on the goal of increasing the amount of material diverted from the landfill, and saving precious landfill space. Because of this, emphasis is placed on making marketable materials that will gain widespread acceptance and insure that we are able to “close the loop”. Additional effort is expended to find new materials to add to the facility and to increase the amount of material diverted from disposal. Being sited at the active landfill also allows for the synergy of additional equipment and staff availability.



Are the economics typical of those found in the industry?

Yes, based on a recent informal survey conducted of tip fees and product pricing, The Greenery seems to be very economically competitive (assuming that tip fee's and product pricing are indicative of economics for each facility) Additionally, ESD staff continue to work to enhance the value of these recycled greenery products and sales are continue to grow every year.

Was the system constructed and operated as budgeted and expected?

From the initial design as a grinding operation through all of the modifications that have been implemented to include new feed stocks and produce new and improved products, the Greenery has always stayed within budget and met or exceeded all operational expectations.



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5) Utilization of Equipment/Systems and Technologies

Types of equipment being utilized

Following is the equipment currently utilized at the Greenery:

- 2 grinders –Diamond Z E6000 tub grinder and Diamond Z 7000 horizontal grinder
- 5 front end loaders – used for moving material into windrows, loading grinders, loading large quantities of end products for bulk users, etc.
- 1 windrow turner – Scarab 828 straddle turner used specifically to turn compost windrows.
- 1 coal scraper – 40 cubic yard used to move large quantities of material from one area of the site to another.
- 1 star screen with varying speeds – Komptech XL Star used to screen compost
- 1 water truck – used to water windrows and maintain dust control.
- 1 colorizer –MegaMite used to color wood chips with non-toxic iron oxide dye.
- 1 air knife – Komptech Farwick Hurricane used for separating film plastic and other light contaminants.
- 1 trommel screen- Komptech Magnum used to screen wood chips

The star screen is ESD's most recent equipment purchase (2009). This machinery was purchased to allow the Greenery to accept more food waste and other feedstock for landfill diversion while continuing to produce a high quality product. In particular, the Multistar XL will allow the Greenery to process more post-consumer food waste that may be contaminated with plastic utensils, plastic bags.



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Detail efficiency and effectiveness of equipment

Equipment efficiency and effectiveness is designed into the overall Greenery operation. City staff participates in a thorough review, testing and specification process prior to purchasing equipment to be used at the Greenery. Product demonstrations are required in order for the City to determine the merits of each system for the Greenery operation.

Standard Operating Procedures (SOPs) were also developed and implemented to shut off the equipment during breaks and lunch periods and to regularly blow out the radiators. Equipment lease contracts were modified to add an EMS participation clause as well as minimum warm up idle times during morning maintenance periods. In addition the site is designed to provide the most efficient use of machinery during routine operations.



Demonstration of windrow turner by Komptech



Palm grinding pilot with Diamond Z grinder

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6) Worker Health & Safety

Describe employee training frequency and safety procedures

Training and safety is an integral part of the overall operation of the Greenery. ESD employs only full time equipment operators to maintain the Greenery. This means that each employ is fully trained in composting and equipment operation. ESD supervisors conduct bi-weekly safety and training tailgate sessions, which discuss any current safety issues, on-going operational safety requirements, EMS procedures and upcoming training opportunities. Staff are trained and evaluated on proper use and maintenance of all of the equipment in operation at the Greenery. This provides for a safe working environment, not only for ESD staff, but for customers as well.

In addition, ESD has worked with a number of groups to help improve the quality of the mulch and compost end product. These groups provided low cost labor while ESD provided training and employment opportunities: the State of California (Department of Corrections, Donovan Prison), County of San Diego (Department of Probation, Public Service), and the non-profit Alpha Project (Homeless Job Rehabilitation).

7) Public Acceptance, Appearance and Aesthetics

Discuss overall appearance of the vehicles, maintenance facility and yard

ESD strives to maintain clean, well-maintained equipment, vehicles and operations yard. Although some equipment is older and well worn, staff takes pride in keeping them looking their best and operating at peak performance. The



facility is kept free from litter and debris that may blow from material drop-off zones or the surrounding landfill. Industry visitors often comment that it is the cleanest facility in the State.

In addition, staff has taken personal pride in creating an aesthetically pleasing and welcoming entrance to the Greenery facility. A 1949 Studebaker pick-up truck was refurbished and painted by Greenery staff and placed at the entrance to the facility on a beautifully landscaped berm that

showcases available mulch, colored wood chips and compost. Landscaping in and around the facility provide a pleasing experience to visitors and customers.



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Does the facility provide public relations measures and public education information?

Mulch is free to San Diego residents and non-residents and businesses pay \$5/yard. Compost is free to San Diego residents if self loaded and sold for \$12/yard to both residents and nonresidents if loaded by the City staff. Bulk rates are offered on compost and mulch. In the past several years, the City has marketed its greenery materials to San Diego residents and businesses through brochures, newspaper and radio ads, and calls to potential customers. The marketing strategy, combined with public education efforts, has helped to create greater public awareness of the uses for compost/mulch and the services offered by the City's Greenery. The result is a very successful program that diverts green waste from the landfill and



creates quality organic materials that are increasingly in demand by the public. Additionally, the City Parks department provides a great opportunity to showcase the high quality of products from the Greenery. Material was delivered to the Friends of Balboa Park Arbor day tree planting and to a native plant restoration project by the San Diego Audubon Society.

SAVE WATER SAVE MONEY SAVE WATER SAVE MONEY
WITH HIGH QUALITY RECYCLED LANDSCAPE PRODUCTS FROM THE CITY'S MIRAMAR GREENERY!

| | | |
|--|--|---|
| COMPOST Improve soil texture Increase nutrient capacity Protect root systems Stop purchasing commercial fertilizers | WOOD CHIPS Reduce irrigation Provide protective ground cover Use for landscape decoration PLAIN RED BROWN NATURAL | MULCH Conserve water Hinder weed seeds Reduce fungal diseases |
|--|--|---|

Miramar Greenery products are available to the public at competitive prices. The Greenery is located at 5180 Convo Street inside the Miramar Landfill. City of San Diego residents may self-load up to two cubic yards of compost or mulch for free with proof of residency. For more information call Environmental Services at 858-694-7000 or visit www.sdrecyclingworks.com



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Public education and outreach efforts have included a video titled “The Miracle of Mulch and Compost” (posted on website) which illustrates the benefits of compost and mulch, a “Got Mulch?” campaign that relies on banners for use at the landfill and bumper stickers of the same design that are distributed at a wide variety of venues,. The



video has been shown on the City Access channel numerous times. Local anchorman and “Environmental” reporter Loren Nancarrow has done a series of pieces on the Miramar Greenery, shown on local TV during prime time viewing.

In addition, numerous tours and field trips are hosted at the Greenery to expose the public and school children to the composting operation, the usefulness of mulch and compost, and the closed loop aspect of creating a usable product.

Is the facility a good neighbor?

Due to the location of this facility on a portion of closed landfill, the closest neighbor is the landfill itself. Other “neighbors” include the Marine Corps Air Station (MCAS) Miramar and a City Metropolitan Wastewater Department biosolids facility. The Greenery maintains a “good neighbor” status with each of these entities by keeping the facility clean, well maintained and properly managed.



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List of Attachments

- 1) ~~Video, "The Miracle of Mulch & Compost"~~
- 2) ~~Flier, "Bagged Compost for Sale"~~
- 3) Brochure, "Guide to Recycled Landscape Products"
- 4) STA Compost Technical Data Sheet



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